Amphe-Power® Connectors with RADSOK® Technology

SL-391-1



For the Most Demanding Industrial and Transportation Applications

- **Highest Amperage Current**
- **Smallest Package Size**
- **Lowest Temperature Rise**
- **Proven Robust Design**
- **Highly Cost Effective**

Amphenol

RADSOK ADVANTAGES

- **LOWER CONTACT RESISTANCE**

  Resistance is primarily a function of contact, normal force, area and surface conditions. The RADSOK's multiplicity of flat grid surfaces assures the greatest possible contact area on the mating pin.
  Results in Longer Life - Reduced contact pressure yields reduced wear. Thousands of insertion and extraction cycles have been completed on RADSOK contacts with little apparent wear or degradation.
  Insertion/extraction force can be tailored to meet the customer's requirements. By varying the degree of twist imparted to the inner grid, the insertion/extraction force (and likewise the grid element normal force) can be customized for every application.
- **LOW MILLI-VOLT DROP PERFORMANCE**

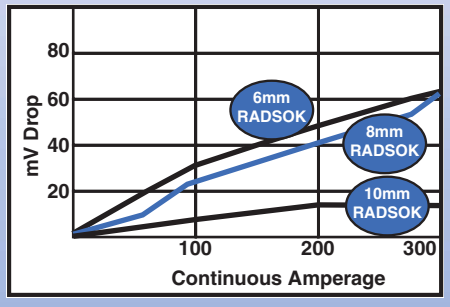
  The RADSOK's strongest benefit is its very low milli-volt drop. Because of the intimate contact provided by the spring force of the grid, the flat contact surface of the grid, and wiping action during insertion, the contact is excellent for applications requiring a consistent milli-volt drop.
- **HIGHER CURRENT CAPACITY WITH MINIMIZED TEMPERATURE RISE**

  High current flow is due to the intimate contact each of the grid elements has with the mating pin. The contacts available in RADSOK and the amperages are as follows:
  Size 12 RADSOK can handle currents up to 35 amps. (Consult Amphenol Power Solutions for availability on size 12 RADSOK).
  Size 8 AWG can handle currents up to 69 amps.
  Size 4 AWG can handle currents up to 120 amps.
  Size 0 AWG can handle currents up to 250 amps.
  Lower overall contact resistance reduces heat build-up, thereby allowing higher current capacities at given temperature limits. Connectors with RADSOK contacts may be produced in various sizes with a variety of amperage capabilities.
- **RELIABILITY UNDER VIBRATION AND SHOCK**

  Since system inertia is minimized by the small package and the fact that the contact is under a spring load, connectors with RADSOK contacts are able to withstand extremes in both vibration and shock regardless of direction or intensity. The one-piece stamped grid is much more uniform and predictable than a number of individual wires or conventional pin and socket design.
- **HIGH QUALITY, CONSISTENCY AND LOWER COST**

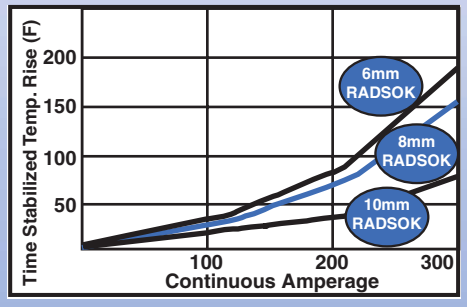
  High speed, automated precision stamping and assembly technology ensure high quality, consistency, and the lowest cost in this class of electric terminal.

Milli-volt Drop Performance



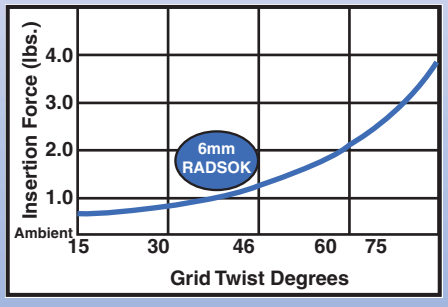
The RADSOK design provides lower milli-volt drop at an increased current load. This allows users to increase the current load per circuit while reducing the total number of circuits in the application, resulting in lower overall costs.

Temperature Rise Performance



Although actual data may vary with the style of connector, typical thermal rise data after 500 cycles of durability is:
Size 8 AWG socket:
38°C @ 46 amps and 78°C @ 69 amps
Size 4 AWG socket:
21°C @ 80 amps and 47°C @ 120 amps
These are very favorable temperature rises for the most demanding applications.

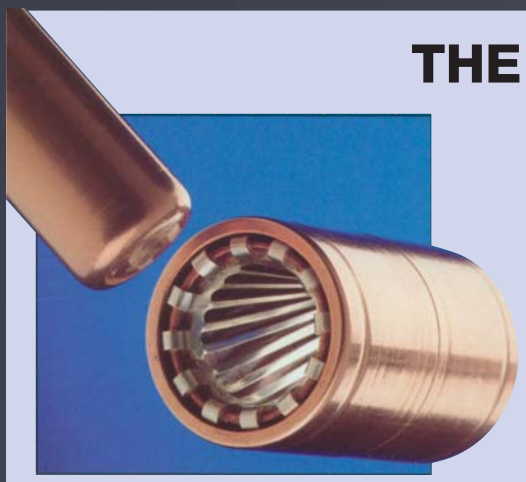
Insertion Force Control



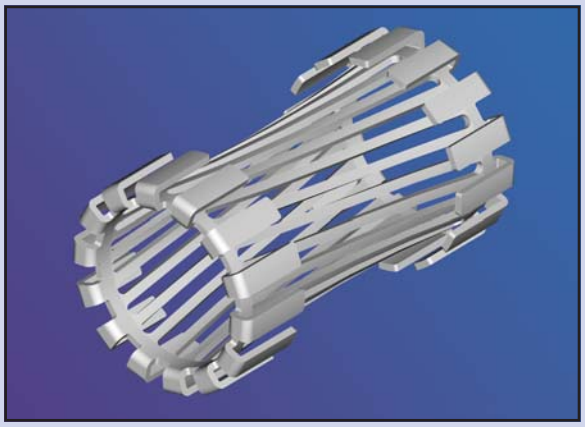
RADSOK contacts can be tailor designed to meet the customer's requirements. By varying the degree of twist, the insertion/extraction force can be customized.

NOTE:The values on these graphs were generated external to connectors.

THE RADSOK DESIGN



- Socket cylinder within female contact has several equally spaced longitudinal beams twisted into a hyperbolic shape.
- As male pin is inserted, axial members in the female half deflect, imparting high current flow across the connection with minimal voltage loss.
- The hyperbolic, stamped grid configuration ensures a large, coaxial, face-to-face surface area engagement.
- Ideal for crimp termination applications requiring repeated mating cycles and high current with a low milli-volt drop.



TWISTED HYPERBOLIC GRID

The RADSOK® (**RAD**ial **SO**c**K**et) High Amperage, Low Insertion Force Electrical Terminal provides value to your purchasing, engineering, quality and manufacturing objectives. RADSOK technology is based upon a stamped and formed flat grid, uniquely twisted into a hyperbolic geometry to provide robust, high density contact to the mating pin contact. Most pin and socket technologies rely upon spring (beam element) properties of the contact elements, which tend to weaken over time. Unlike most other pin and socket solutions, the RADSOK also utlilizes the tensile strength properties of the flat, high conductivity alloy grid. This provides the high normal forces required for conductivity while also providing large conductive surface area. Correspondingly low voltage drop and low temperature rise are also achieved while maintaining low insertion forces.

STANDARD & CUSTOM-DEVELOPED SOLUTIONS

- In addition to the various standard sizes of RADSOK components, custom-developed solutions are also available. See the new RADSOK products that have been developed on the special pages at the end of this brochure. Amphenol has the global design, engineering and manufacturing resources to provide RADSOK sockets pressed into busbars, crimped to cables, assembled into connectors, assembled into customer or Amphenol designed specialized electrical devices, or as stand-alone components. Amphenol also manufactures a full compliment of mating pin contacts for any application.
- Steady-state current capacities for standard RADSOK products range from 50 amps to over 500 amps.
- Standard contact plating is typically Silver (Ag) although many other plating specifications may be used for your application.
- Amphenol connectors with RADSOK contacts are offered with a variety of positive-locking features that insure and maintain fully-mated connections.
- Sealing and high voltage hot break options are available within the RADSOK itself or within a very wide range of IP rated connector housings to provide environmental protection to the contact area.

A wide variety of applications include:

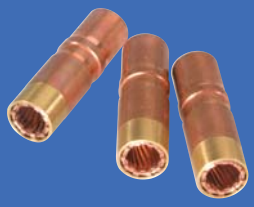
- **battery connections**
- **stationary power sets**
- **generators and alternators**
- **base stations**
- **petro-chemical installations**
- **military platforms**

RADSOK® High Amperage Contacts



Insert pattern 28-5 with (2) size 4 RADSOK sockets and standard contacts: (1) size 12 and (2) size 16

- Current contact offering is RADSOK sockets in sizes 0, 4 and 8. Other RADSOK contact sizes are being developed.
- Application specific sizes can often be produced more economically than other premium terminal solutions.
- Amphenol can also tailor the contact design to exact customer needs.



Size 0 RADSOK



Size 4 RADSOK



Size 8 RADSOK

THE AMPHE-POWER FAMILY OF CONNECTORS

















The Amphe-Power Series consists of three of the time-tested and reliable families of Amphenol Industrial Connectors, all of which are MIL-C-5015 styles, medium to heavy duty cylindricals. These series, enhanced with RADSOK sockets, can now handle up to 150% higher amperages. Current Amphe-Power product line supports from 50A to 1000A continuous duty.

AMPHE-POWER P-LOK

- Rapid mating with a push-pull, spring loaded coupling system - audible & tactile conformation of full mating.
- Environmental sealing to IP67 specification levels - front and rear O-ring seals and gaskets as well as compression grommets designed to seal on the cable jacket
- Neoprene inserts are bonded to the connector shell for ease of assembly
- One-piece keyed aluminum shell, finished in black hard-coat plating - provides a strong industrial grade connector, engineered for a long service life.

AMPHE-POWER GT

- Reverse bayonet coupling connector with an audible, tactile and visual full mating feature.
- Heavy duty, rugged shells with a wide variety of backshell options
- Inserts available in Neoprene or Viton
- Water-proof construction and available with over-molded coupling nut for added damage protection and increased gripping surface
- Variety of plating options including non-cadmium zinc cobalt (black or green), non-conductive colorized anodic plating to service the HMI lighting industry

AMPHE-POWER 5015

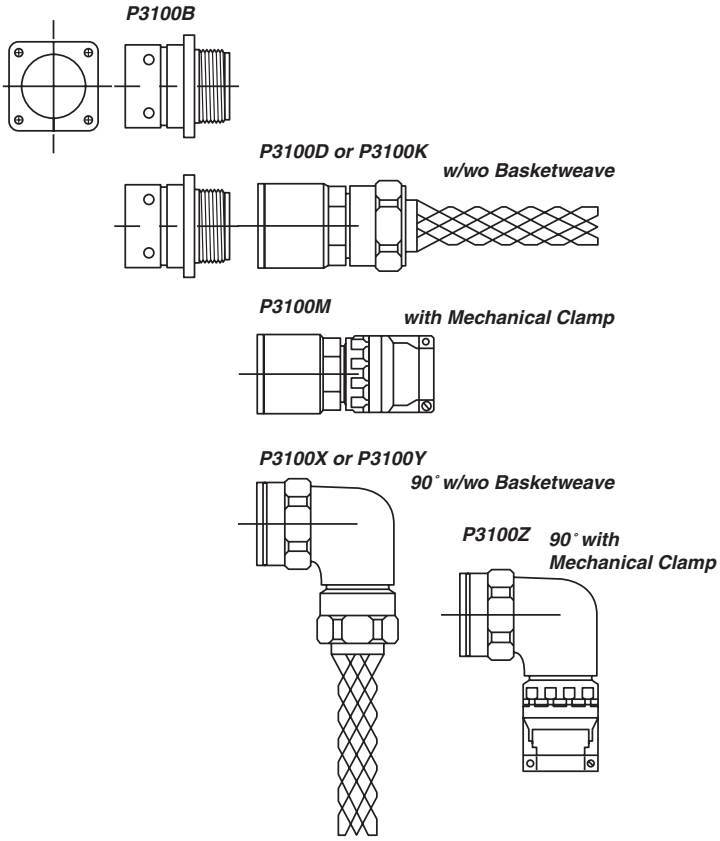
- Durable, field-proven cylindrical connector derived from MIL-C-5015 family.
- Threaded coupling connector with resilient Neoprene inserts, single key/keyway polarization
- Styles include: solid shell for general, non-environmental applications; pressurized style for use on pressurized bulkheads or pressure barriers; environmental resisting style with strain relief; lighter weight and shorter environmental resisting style

AMPHE-POWER® P-LOK CONNECTOR STYLES

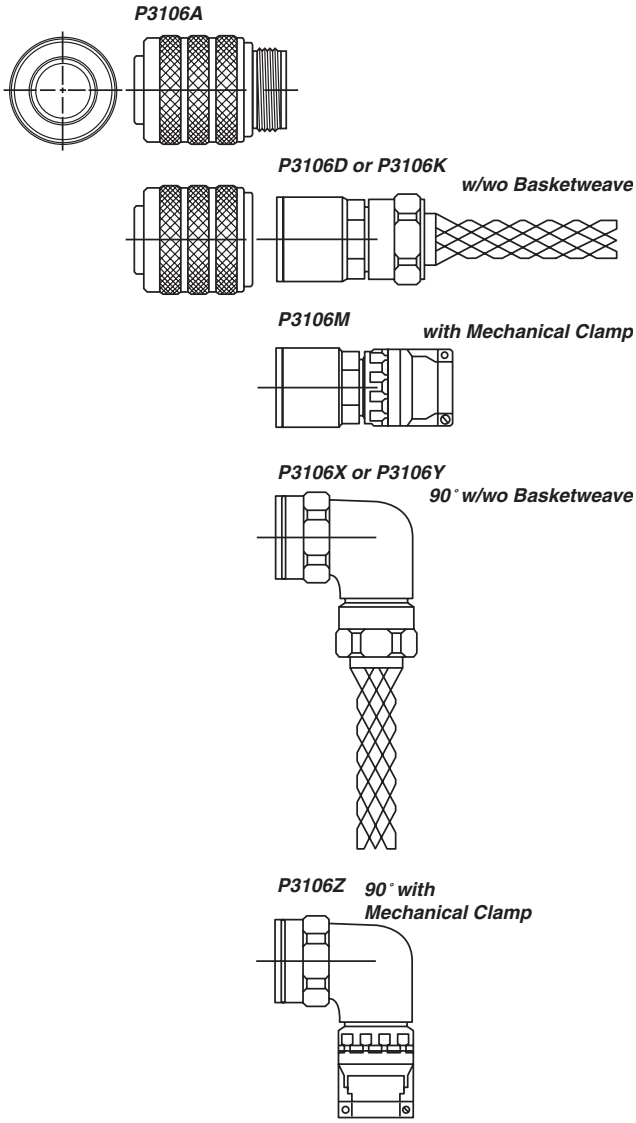
The P-Lok Heavy Duty Series offers a wide range of shell styles which can be enhanced with RADSOK high amperage contacts



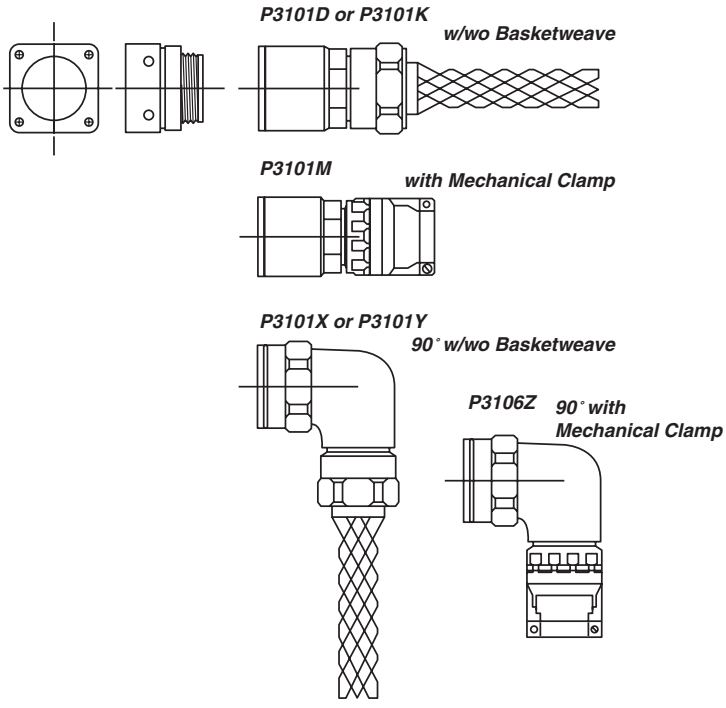
WALL MOUNT OR FLANGE MOUNT RECEPTACLES



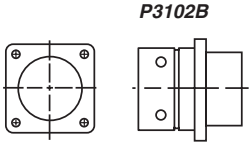
PLUGS



INLINE RECEPTACLES



BOX MOUNT RECEPTACLES



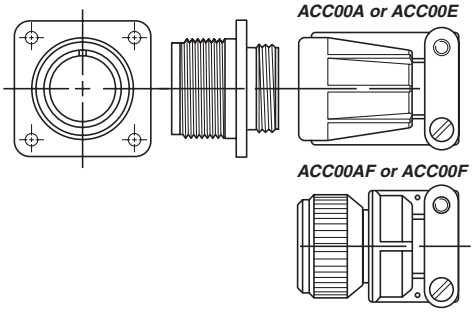
For complete dimensional information on P-Lok Series connector styles, consult Amphenol/Pyle P-Lok Catalog.

AMPHE-POWER® 5015 CONNECTOR STYLES

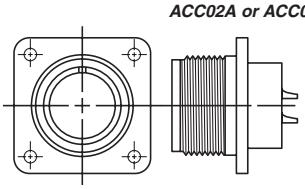
The 5015 Standard Cylindrical Series offers a wide range of shell styles which can be enhanced with RADSOK high amperage contacts



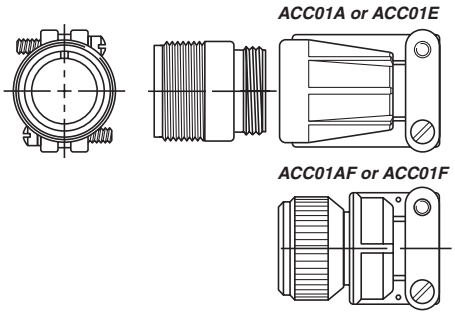
WALL MOUNT RECEPTACLES



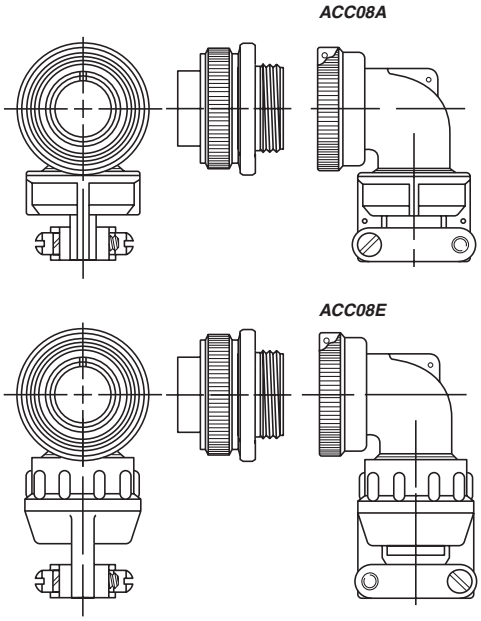
BOX MOUNT RECEPTACLES



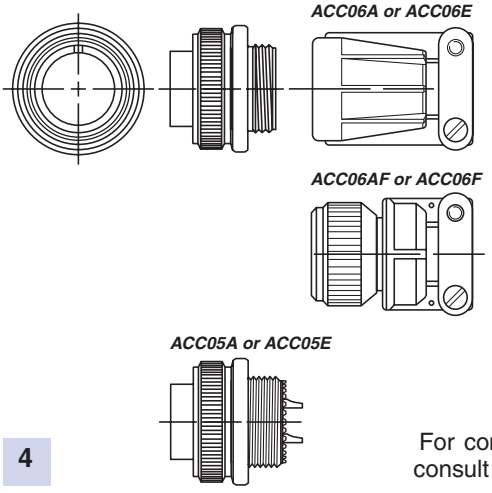
INLINE RECEPTACLES



90 DEGREE PLUGS



STRAIGHT PLUGS

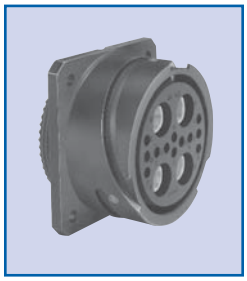


For complete dimensional information on 5015 connector styles, consult Amphenol AC Catalog 12-025.

AMPHE-POWER® GT CONNECTOR STYLES

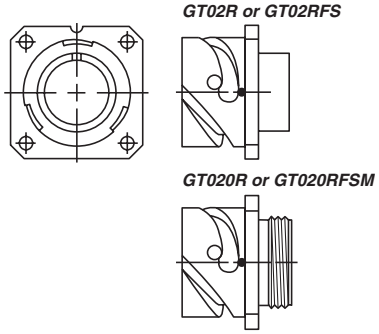
The GT Reverse Bayonet Series offers a wide range of shell styles which can be enhanced with RADSOK high amperage contacts

WALL MOUNT RECEPTACLES FOR FRONT PANEL MOUNTING

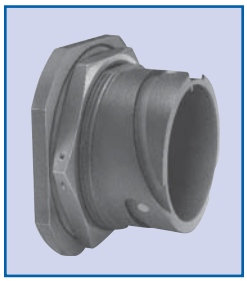


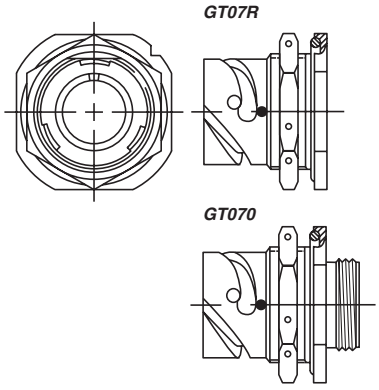
BOX MOUNT RECEPTACLES FOR FRONT PANEL MOUNTING





JAM NUT RECEPTACLES

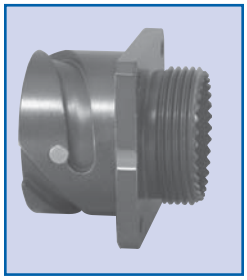




INLINE RECEPTACLES



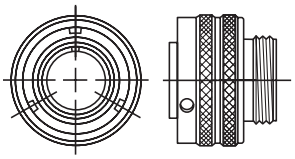
SQUARE FLANGE RECEPTACLES FOR REAR PANEL MOUNTING



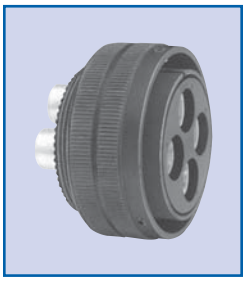
For complete dimensional information on GT Series connector styles, consult Amphenol catalog 12-024.

AMPHE-POWER® GT CONNECTOR STYLES, CONT.

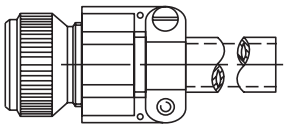
STRAIGHT PLUGS



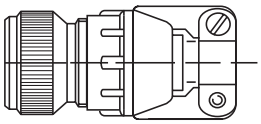
GT06A or GT06R



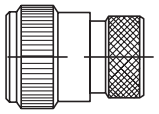
GT06AF or GT06F



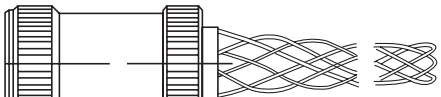
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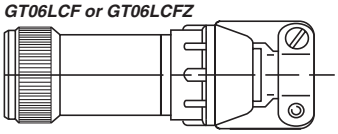
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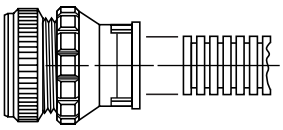
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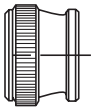
GT06LCF or GT06LCFZ



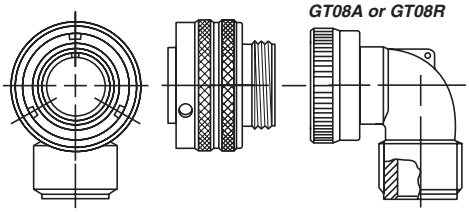
GT06PFC



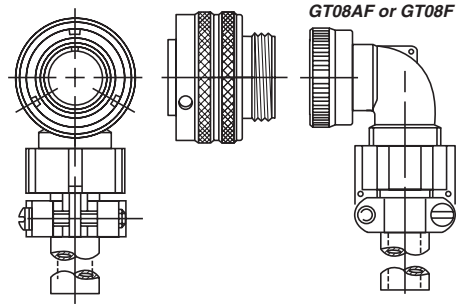
GT06RV



90 DEGREE PLUGS



GT08A or GT08R

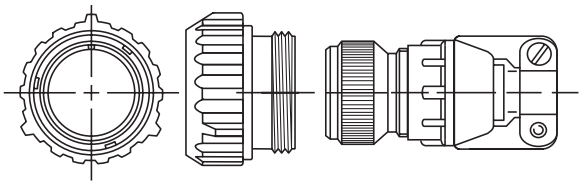


GT08AF or GT08F

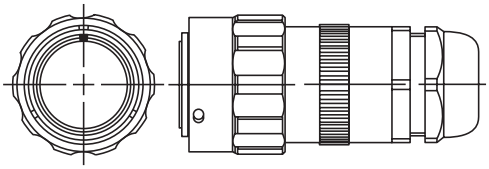


ADDITIONAL STRAIGHT PLUGS

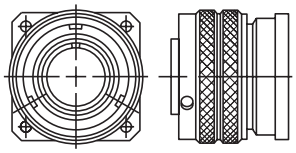
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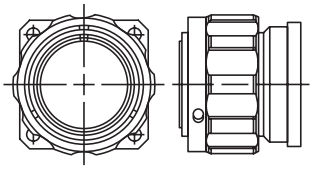
GT065SL



GT06PP

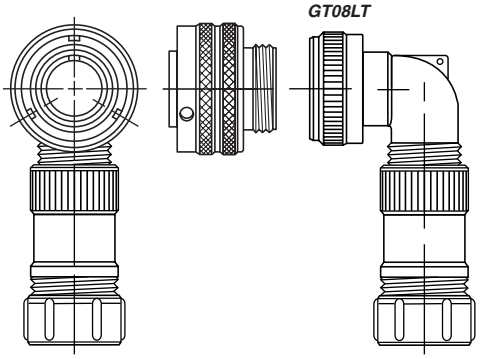


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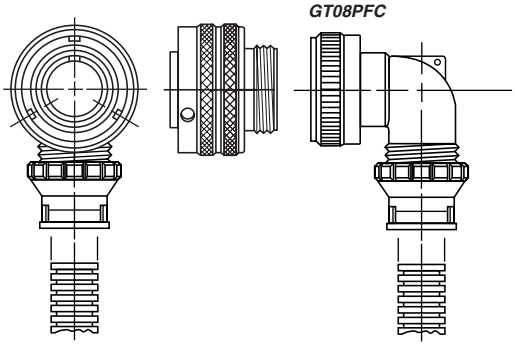


ADDITIONAL 90 DEGREE PLUGS

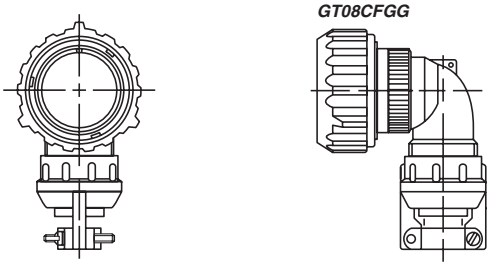
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GT08PFC

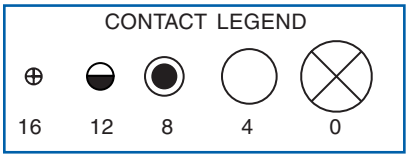


GT08CFGG



RADSOK Layouts

The following RADSOK layouts incorporate RADSOK sockets in sizes 8, 4, and 0, with standard contacts in sizes 16 and 12. All patterns are available in GT Series and Threaded 5015 Series. Only shell sizes 18-28 are available in P-Lok. Consult Amphenol Industrial, Fraser, MI for availability of P-Lok.



1 Contact

	14-3	16-12	18-6	18-7	20-2	22-7
No./Size of Contacts	1 #8	1 #4	1 #4	1 #8	1 #0	1 #0
Service Rating	A	A	D	B	D	E

2 Contacts

	18-14	20-12	20-23	22-1	24-9
No./Size of Contacts	1 #4, 1 #16	1 #4, 1 #16	2 #8	2 #8	2 #4
Service Rating	A	A	A	D	A

3 Contacts

	28-7	32-5	16-7	20-19	20-51
No./Size of Contacts	2 #4	2 #0	1 #8, 2 #16	3 #8	3 #8
Service Rating	D	D	A	A	A

	20-59	22-2	22-6	22-21	22-80
No./Size of Contacts	3 #8 for #10 or 12 wire	3 #8	2 #8, 1 #16	1 #0, 2 #16	3 #8 for #10 or 12 wire
Service Rating	A	D	D	A	A

4 Contacts

	28-3	28-6	36-4	18-13
No./Size of Contacts	3 #8	3 #4	3 #0	1 #8, 3 #12
Service Rating	E	D	A = D; C = A	A

	20-20	20-24	22-4	22-22	24-22
No./Size of Contacts	1 #4, 3 #12	2 #8, 2 #16	2 #8, 2 #12	4 #8	4 #8
Service Rating	A	A	A	A	D

For availability of other insert arrangements, consult Amphenol, Sidney, NY.

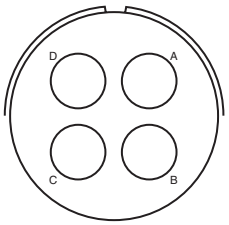
RADSOK Layouts

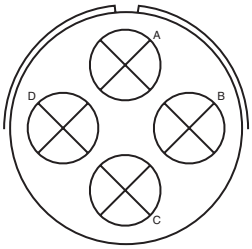
The following RADSOK layouts incorporate RADSOK sockets in sizes 8, 4, and 0, with standard contacts in sizes 16 and 12. All patterns are available in GT Series and Threaded 5015 Series. Only shell sizes 18-28 are available in P-Lok. Consult Amphenol Industrial, Fraser, MI for availability of P-Lok.

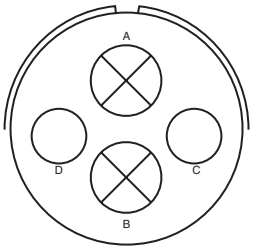
CONTACT LEGEND

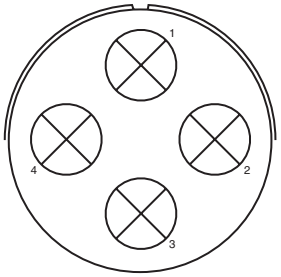


4 Contacts



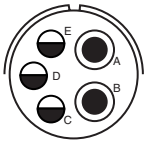


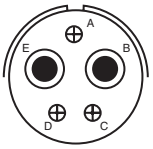


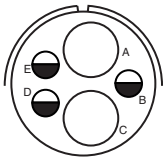


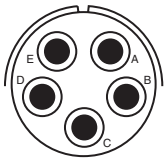
	32-17	36-5	36-51	40-57
No./Size of Contacts	4 #4	4 #0	2 #0, 2 #4	4 #0
Service Rating	D	A	D	E

5 Contacts

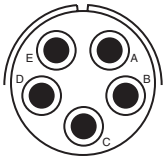


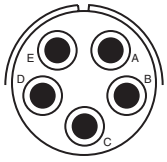


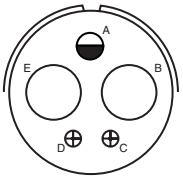


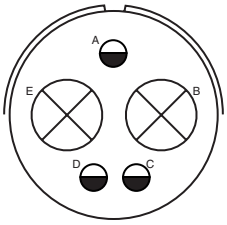


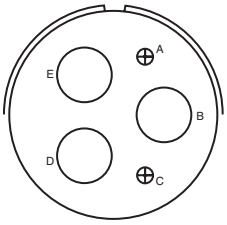
	20-14	22-12	24-12	24-51
No./Size of Contacts	2 #8, 3 #12	2 #8, 1 #16	2 #4, 3 #12	5 #8 B, E for AN #10 or 12 wire A, C, D for AN #8 wire
Service Rating	A	D	A	A



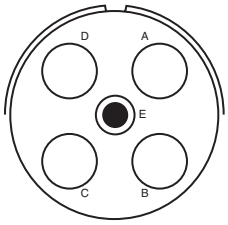


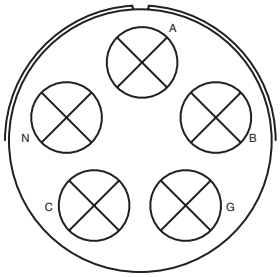


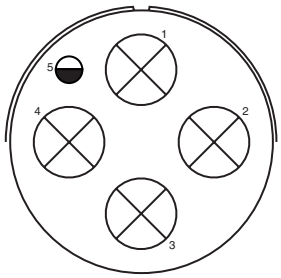




	24-53	24-79	28-5	32-1	32-2
No./Size of Contacts	5 #8	5 #8	2 #4, 1 #12, 2 #16	2 #0, 3 #12	3 #4, 2 #16
Service Rating	A	A	D	A = E; B, C, D, E = D	E





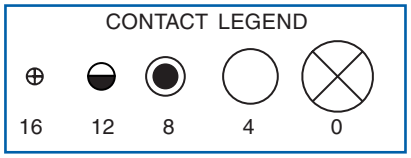


	32-79	40-5	40-75
No./Size of Contacts	4 #4, 1 #8	5 #0	1 #12, 4 #0
Service Rating	D	A	E

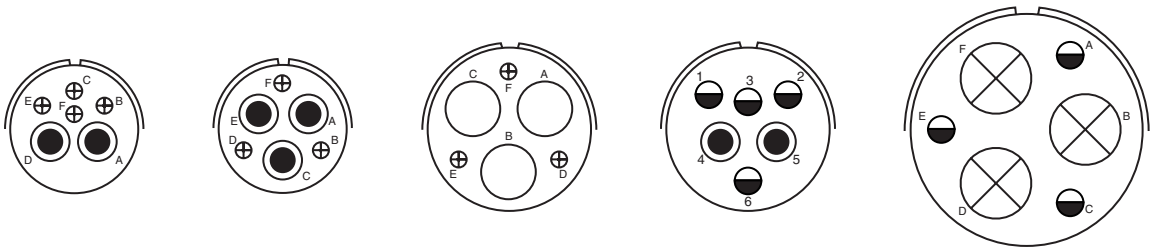
For availability of other insert arrangements, consult Amphenol, Sidney, NY.

RADSOK Layouts

The following RADSOK layouts incorporate RADSOK sockets in sizes 8, 4, and 0, with standard contacts in sizes 16 and 12. All patterns are available in GT Series and Threaded 5015 Series. Only shell sizes 18-28 are available in P-Lok. Consult Amphenol Industrial, Fraser, MI for availability of P-Lok.

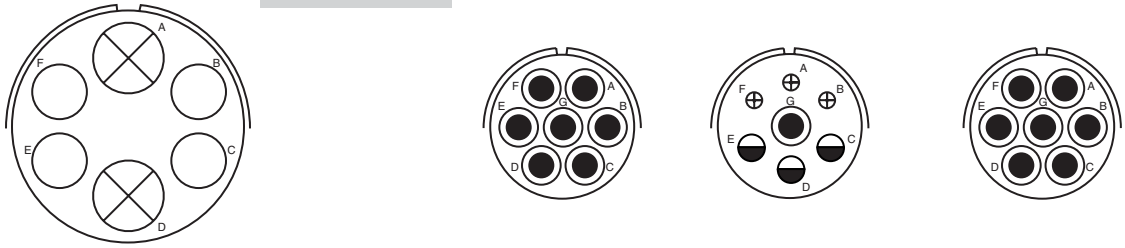


6 Contacts

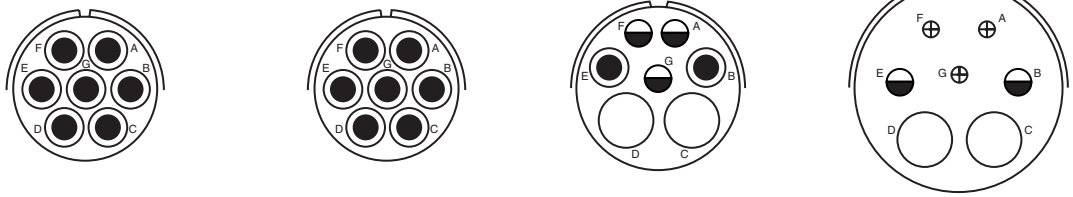


	20-8	20-22	28-22	28-82	36-3
No./Size of Contacts	2 #8, 4 #16	3 #8, 3#16	3 #4, 3 #16	2 #8, 4 #12	3 #0, 3 #12
Service Rating	Inst.	A	D	D	D

7 Contacts

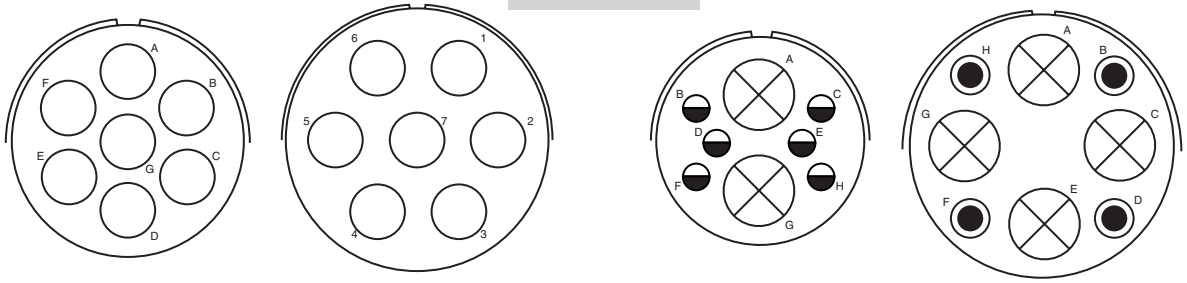


	36-6	24-10	24-16	24-60
No./Size of Contacts	2 #0, 4 #4	7 #8	1 #8, 3 #12, 3 #16	7 #8 for #10 or 12 wire
Service Rating	A	A	A, B, F, G = D; C, D, E = A	A



	24-71	24-75	28-10	32-10
No./Size of Contacts	2 #8, 5 #8 for #10 or 12 wire	5 #8, 2 #8 for #16 wire	2 #4, 2 #8, 3 #12	2 #4, 2 #8, 3 #16
Service Rating	A	A	G = D; Bal. = A	A, F = E; G = B; B, E = D; C, D = A

8 Contacts



	36-77	40-87	32-15	40-AD
No./Size of Contacts	7 #4	7 #4	2 #0, 6 #12	4 #8, 4 #0
Service Rating	D	D	D	A

For availability of other insert arrangements, consult Amphenol, Sidney, NY.

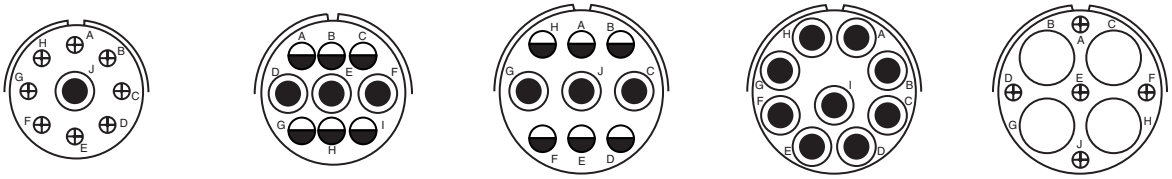
RADSOK Layouts

The following RADSOK layouts incorporate RADSOK sockets in sizes 8, 4, and 0, with standard contacts in sizes 16 and 12. All patterns are available in GT Series and Threaded 5015 Series. Only shell sizes 18-28 are available in P-Lok. Consult Amphenol Industrial, Fraser, MI for availability of P-Lok.

CONTACT LEGEND

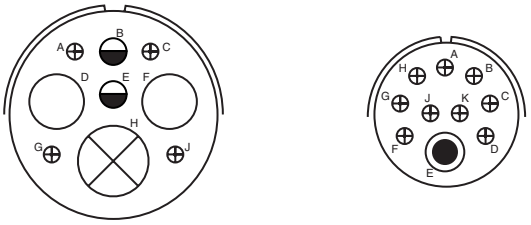


9 Contacts



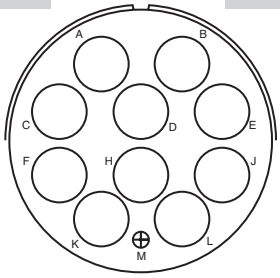
	22-27	24-11	28-1	28-84	28-AY
No./Size of Contacts	1 #8, 8 #16	3 #8, 6 #12	3 #8, 6 #12	9 #8	4 #4, 5 #16
Service Rating	J = D, Bal. = A	A	A, J, E = D; Bal. = A	A	A

10 Contacts



	32-3	24-21
No./Size of Contacts	1 #0, 2 #4, 2 #12, 4 #16	1 #8, 9 #16
Service Rating	D	D

11 Contacts



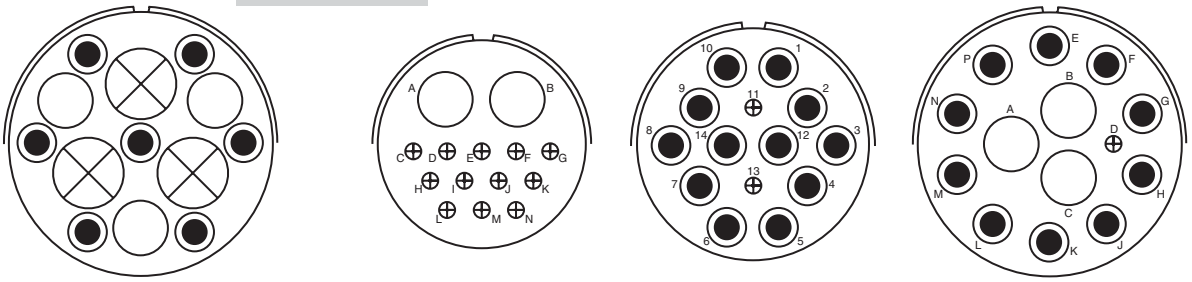
	40-80
No./Size of Contacts	1 #16, 10 #4
Service Rating	A

13 Contacts



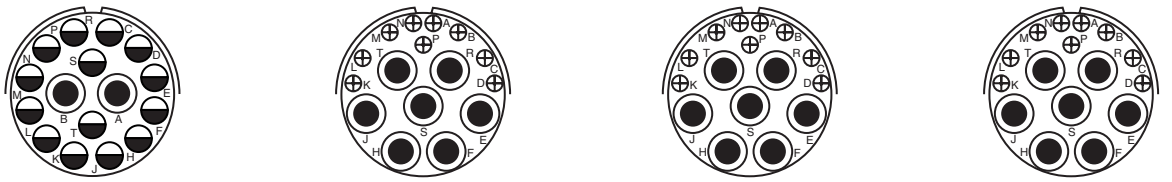
	24-58
No./Size of Contacts	3 #8, 3 #12, 7 #16
Service Rating	A

14 Contacts



	40-AR	32-9	36-78	40-AU
No./Size of Contacts	3 #0, 3 #4, 7 #12	2 #4, 12 #16	12 #8, 2 #16	3 #4, 10 #8, 1 #16
Service Rating	I	D	A	A

16 Contacts



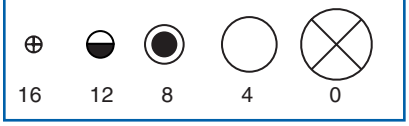
	28-66	28-74	28-75	28-79
No./Size of Contacts	2 #8, 14 #12	3 #8 for #10 wire (S, T, R) 4 #8, 9 #16	9 #16, 7 #8 for #10 wire	7 #8, 9 #16
Service Rating	A	A	A	A

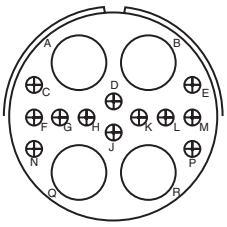
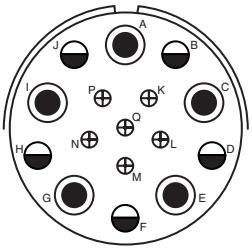
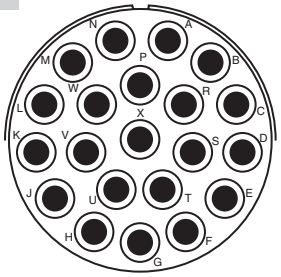
For availability of other insert arrangements, consult Amphenol, Sidney, NY.

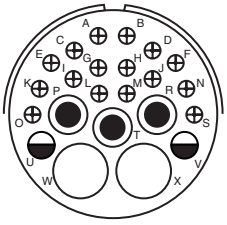
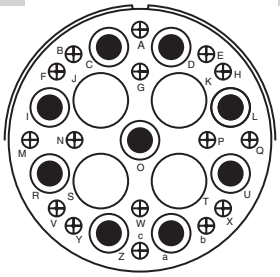
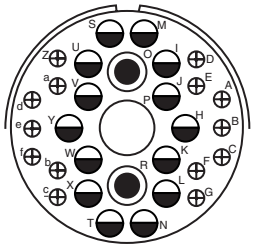
RADSOK Layouts

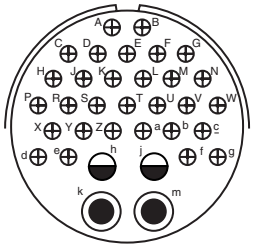
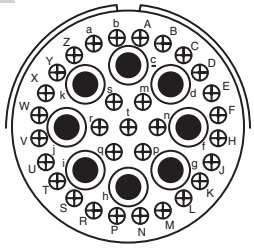
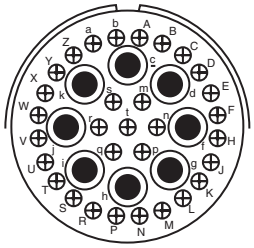
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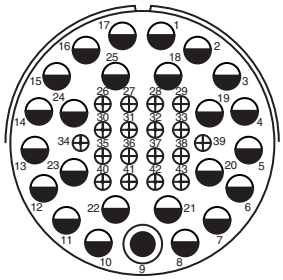
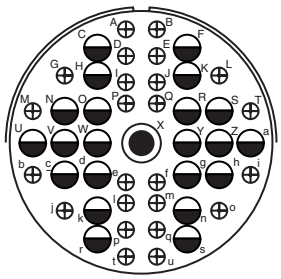
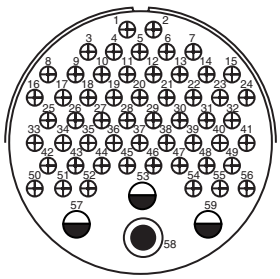
CONTACT LEGEND



16 Contacts	32-82	36-14	21 Contacts	40-68
				
No./Size of Contacts	4 #4, 12 #16	5 #8, 5 #12, 6 #16		21 #8
Service Rating	A	D		A

23 Contacts	32-6	29 Contacts	40-10	31 Contacts	36-9
					
No./Size of Contacts	2 #4, 3 #8, 2 #12, 16 #16		4 #4, 9 #8, 16 #16		1 #4, 2 #8, 14 #12, 14 #16
Service Rating	A		A		A

34 Contacts	36-20	39 Contacts	36-54	36-55
				
No./Size of Contacts	2 #8, 2 #12, 30 #16		8 #8, 31 #16	8 #8 for #6 wire, 31 #16
Service Rating	A		A	A

43 Contacts	40-AT	47 Contacts	40-9	59 Contacts	40-61
					
No./Size of Contacts	1 #8, 24 #12, 18 #16		1 #8, 22 #12, 24 #16		1 #8, 3 #12, 55 #16
Service Rating	A		A		A

For availability of other insert arrangements, consult Amphenol, Sidney, NY.

AMPHE-POWER® CONNECTORS

HOW TO ORDER

Amphe-Power P-Lok Part Numbering

P 3106 K 18 1 P X 1 7

P
designates
P-Lok Series Connectors

Shell Type
3100 = Flange Mount Receptacle
3101 = Inline Receptacle
3102 = Box Mount Receptacle
3106 = Plug

Hardware Termination
A = General duty Adapter
B = Less Hardware (not available for plugs)
D* = Straight Barrell with Grommet and Gland Nut
F = Mechanical Clamp (non-environmental)
K* = Straight Barrel with Grommet, Gland Nut and Basketweave
M* = Straight Barrel with Grommet and Mechanical Clamp
X* = 90 Degree Grommet and Gland Nut
Y* = 90 Degree Elbow Grommet, Gland Nut and Basketweave
Z* = 90 Degree Elbow with Grommet and Mechanical Clamp

Shell Size
and Insert Configuration
Shell sizes available in P-Lok Series: 18, 20, 22, 24, 28.
Insert availability: See pages 7-11 for Amphe-Power P-Lok connectors incorporating RADSOK sockets. See Amphenol P-Lok catalog for the complete insert availability for the P-Lok Series.

Contact Style
P = Pin
S = Socket

Alternate Key Rotations
W, X, Y or Z (Omit for normal key)

Contact Type
STANDARD P-LOK ORDERING:
1 = Crimp, silver plated
3 = Crimp, gold plated
5 = Less contacts

Contact Type
AMPHE-POWER P-LOK ORDERING:
7 = Crimp, silver plated RADSOK sockets in contact sizes 8 and larger; remaining cavities will have crimp silver plated standard sockets. (See RADSOK layouts on pgs. 7-11) For other variations, consult Amphenol, Sidney, NY for availability.

Consult Amphenol for availability of Solder contacts in Amphe-Power Connectors.

Grommet Size*
2 = .125 – .250
3 = .250 – .375
4 = .375 – .500
5 = .500 – .625
6 = .625 – .750
7 = .750 – .875
8 = .875 – 1.000

* Must include grommet size to complete part number.

Amphe-Power 5015 Part Numbering

AC C 00 AF 20 – 24 R X (025)

AC
designates
Industrial AC** 5015 Connectors

C = Crimp contacts

Shell Type
00 = Wall mounting receptacle
01 = Line receptacle
02 = Box mounting receptacle
05 = Straight plug
06 = Straight plug with hardware
08 = 90 degree plug

Class
A or AF = General duty connector
E or F = Environmental connector for a wire bundle

Shell Size and Insert Configuration
Shell sizes available in AC 5015 Series: 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40.
(Note: shorter shells 10SL, 12S, 14S and 16S, available in AC series, are not available within the Amphe-Power with RADSOK offering.)
Insert availability: See pages 7-11 for Amphe-Power 5015 connectors incorporating RADSOK sockets. See Amphenol AC catalog, 12-025 for the complete insert availability for the AC Series.

Variations
(003) = Olive drab cadmium plate finish
(025) = Black zinc alloy finish
(024) = Green zinc alloy finish
(023) = Electroless nickel finish
(G96) = Black hard-coat anodize
(A24) = .000035 gold/nickel on contacts

Alternate Key Rotations
W, X, Y or Z (Omit for normal key)

Contact Type
STANDARD AC 5015 ORDERING:
P = Pin
S = Socket

Contact Type
AMPHE-POWER AC 5015 ORDERING:
R = Crimp, silver plated RADSOK sockets in contact sizes 8 and larger; remaining cavities will have crimp silver plated standard sockets. (See RADSOK layouts on pgs. 7-11) For other variations, consult Amphenol, Sidney, NY for availability.

Consult Amphenol for availability of Solder contacts in Amphe-Power Connectors.

** Amphe-Power 5015 Connectors are based on the AC Threaded Series from Amphenol which incorporates 5015 contact arrangements. Within the AC family a reverse bayonet style is also offered, but the bayonet style is not currently offered with RADSOK sockets. See Amphenol catalog 12-025 for more information on the AC connector family.

AMPHE-POWER® CONNECTORS

HOW TO ORDER

Amphe-Power GT Part Numbering

GT C 00 A 36-5 P W (RDS)

GT
designates GT Series,
Reverse Bayonet Connectors

Contact Type and Insert Material
C = Crimp
CN = Crimp with stainless steel
CY = Crimp with Viton
CL = Crimp with low smoke/flame retardant inserts
No designation required for Neoprene components

Shell Style
00 = Wall mount receptacle
01 = Inline receptacle
02 = Box mount receptacle
020 = Box mount receptacle with accessory threads
030 = Square flange receptacle - rear panel mount
06 = Straight plug
062 = Straight plug with deep serrated coupling nut*
064 = Panel mounted plug with heavy duty coupling nut
065 = Straight plug with long heavy duty coupling nut
07 = Jam nut receptacle - rear panel mount
070 = Jam nut receptacle with accessory threads
08 = 90 degree angle plug

Connector Class
Consult Amphenol GT Reverse Bayonet Connector catalog, 12-024 for full descriptions of classes

Shell Size and Arrangement
Shell sizes available in GT Series: 14, 16, 18, 20, 22, 24, 28, 32, 36, 40.
(Note: shorter shells 10SL, 14S and 16S, available in GT series, are not available within the Amphe-Power with RADSOK offering.)
Insert availability: See pages 7-11 for Amphe-Power GT connectors incorporating RADSOK sockets. See Amphenol GT catalog, 12-024, for the complete insert availability for the GT Series.

Contact Style
P = Pin
S = Socket

Alternate Key Rotations
W, X, Y or Z (Omit for normal key)

Connector Modification
STANDARD GT ORDERING:
No suffix needed for standard olive drab with silver plated contacts.
(014) Olive drab cadmium plate, nickel base
(A24) Gold/nickel plated contacts
(025) Black zinc cobalt
(027) Conductive black zinc cobalt
(024) Green zinc cobalt

Connector Modification
AMPHE-POWER GT ORDERING:
(RDS) Crimp, silver plated RADSOK sockets in contact sizes 8 and larger; remaining cavities will have crimp silver plated standard sockets.
(See RADSOK layouts on pgs. 7-11)
For other variations, consult Amphenol, Sidney, NY for availability.

Consult Amphenol for availability of Solder contacts in Amphe-Power Connectors

ACCESSORIES FOR AMPHE-POWER CONNECTORS

Amphenol provides accessories such as connector protection caps, sealing plugs for sealing unused contact cavities, additional cable clamps, bushings, and insertion and removal tools for standard contacts. Refer to the previously referenced series catalogs for information on these accessory products:

12-024 catalog for GT Series accessories
12-025 catalog for AC 5015 accessories
P-Lok catalog for P-Lok accessories

AMPHE-POWER® CONNECTORS

SPECIALS

POWER P-LOK 14mm CONNECTOR

The Power P-Lok Connectors with 14mm RADSOK® sockets are used for high amperage applications such as fuel cells, load banks or charging systems. The shell size 28 plug houses a single crimp pin contact, available in 2/0 or 4/0AWG sizes. The receptacle contains the 14mm RADSOK socket with crimp or busbar-mount terminations available. It is rated for 500A continuous duty.

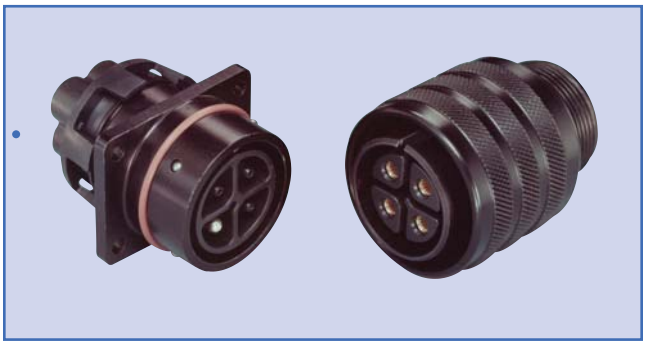
Amphenol's unique P-Lok Connectors feature a quick mating push-pull locking mechanism and full environmental protection. Ingress protection rating is IP67. Standard connector options include electroless nickel finish on the shell and silver plating on the contacts. Special optional features include dead-front pin contact, UL recognized leakage paths, and touch-proof sockets.

This connector is designed to be overmolded as a custom cable assembly with EMI shield termination to the plugshell. Only Amphenol can provide custom overmolded cable solutions featuring Amphe-Power connectors. Neoprene, Hypalon and other overmold materials are available in both straight and right-angle wire orientations.



FIRST MATE, LAST BREAK P-LOK

Another Amphe-Power product is a connector with smaller size 8 gage pins and RADSOK® sockets. The pins feature a nonconductive "Dead Front" feature for the personal safety of the user when the connector is unmated. There is also a "First Mate - Last Break" pin in the pattern which connects the grounding circuit prior to the other three high amperage circuits.
The four position insert pattern features longer creepage paths for high voltage applications and silver plated crimp pins and sockets.



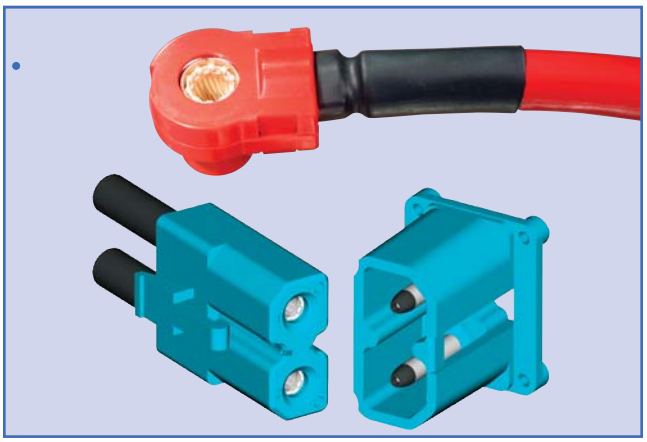
AMPHE-BASE, 2 & 3 POSITION, MOLDED CONNECTORS FOR PCB OR BUS BAR APPLICATIONS

Amphenol has developed a connector series designed to provide 100 amps per pin of power to printed circuit board or bus bar applications. Molded, one-piece Lexan® construction provides a strong, durable, lightweight, non-environmental connector for base station power. Circuit identification symbols (+ , -, and Ground) are molded in for quick and easy identification. This connector design allows one-handed mating and unmating, tool-less contact insertion of nickel plated crimp RADSOK® 6mm sockets and molded-in contact retention features. The off-center spacing of the socket positions provide a failsafe orientation of the connector, insuring the correct circuits are properly mated.



AMPHE-COM™ CONNECTORS

The Amphe-Com series has expanded to include a range of non-environmental, TUV "touch-proof", molded connectors. The product is manufactured as a 2-position plug and receptacle and is based around 3.6mm RADSOK® technology, providing a 70A current rating. The socket is packaged in the plug with wire crimp sizes available in 6, 8 and 10AWG. Busbar and box receptacles with pin contacts are available. The busbar-mount has swage pins for single or multi-layer busbars. The box mount has a pin-retention clip and is available with either wire crimp or PC tail pins. Amphenol also offers the single position 8mm RADSOK Amphe-Com with molded socket shell.

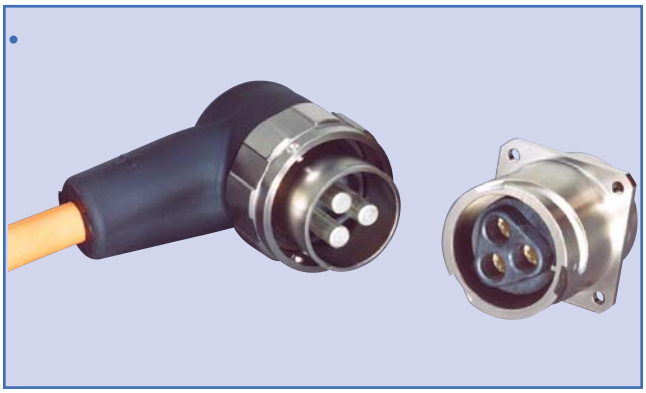


AMPHE-POWER® CONNECTORS

SPECIALS

AMPHE-POWER™ POWER GT

Amphenol's GT series reverse bayonet connector has been modified to incorporate three 8.0mm RADSOKs mounted in a common termination to busbar or cable. This design created the first TUV "finger-proof" 500A connector in the marketplace. Fitted into a shell size 28 GT connector, this represents an ultrahigh current density in a compact layout. Ninety-degree wire orientation on the plug also provides low-profile mounting for tight packaging requirements. The pins on the plug may also be fitted with "dead-front" tips to finger-proof the plug side as well. The plug is designed to be over-molded and can also be fitted with mechanical hardware for individual requirements.



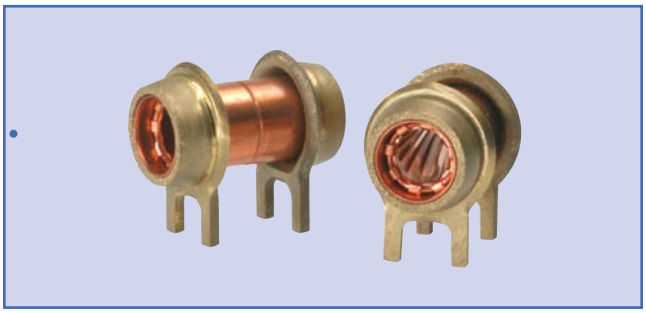
AMPHE-POWER™ COMPOSITE GT 32-AR

Featuring a high performance molded composite plug shell, coupling nut, receptacle, and hardware, this GT meets all of the specifications for high power process control and server applications. Additional features include the RADSOK high amperage socket contact technology, enabling increased current ratings to 120A on individual contacts. Compression (setscrew) wire termination to the 4/6AWG or 8/10AWG conductors allows easy field replacement of pin or socket contacts, or complete plug and receptacle assemblies, without requiring specialized tooling. Connectors are listed to UL/CUL 2238 Standard, Control Number 19VP. Amphe-Power® Composite GT connectors utilize a standard PG adapter watertight strain relief on the plug to achieve their IP67 seal rating. Insulation resistance is rated at 1000 Megohms and dielectric withstanding voltage is rated at 2000 V_{AC} (RMS). The composite GT is flammability rated to UL94V-0.



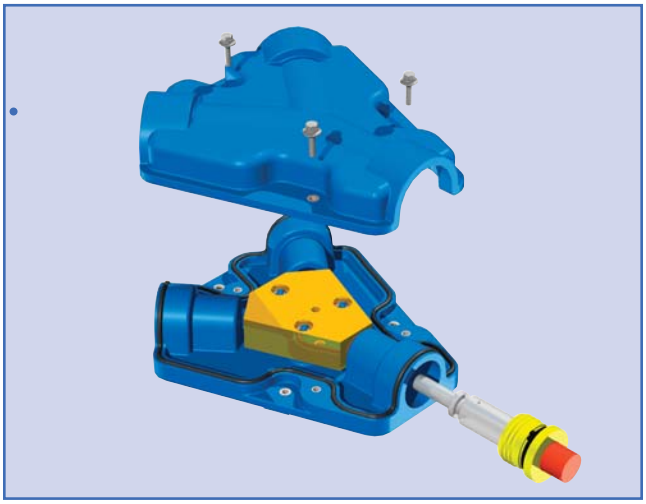
RADSOK® PCB CONNECTORS

Amphenol RADSOK high amperage electrical terminal with mounting features for board-mount use. Standard parts are available in 3.6mm (70A), 6.0mm (120A), and 8.0mm (200A) sizes. Mounting legs are spaced in the industry-standard 0.200 inch pitch. Designed to be applied manually or by reflow solder process, high-volume applications may be available in reel-fed packaging. Amphenol also offers a full compliment of board-mount or wire-crimp pin contacts. Contact Amphenol Power Solutions, Fraser, MI for your specific applications.



RMT HIGH POWER JUNCTION BLOCK

Amphenol Industrial is expanding the offering to the Rail/Mass Transit market with the introduction of this 1000A three-pole junction block. This product is the ideal replacement for high-current bolted connections that absorb high labor costs and time for maintenance and repair procedures. Three bolts are removed to open the case and allow the pins to be unmated. Designed to be fully sealed and ruggedized for harsh railcar environments, 18.0mm RADSOK® contacts provide a 1000A continuous current rating on 646MCM locomotive-grade conductors. Other sizes of wire crimp pins are available for specific applications.



Contact Amphenol, Sidney NY or Amphenol Power Solutions, Fraser MI for ordering information on the products on these special products pages or any other special application requirements.

AMPHE-POWER® CONNECTORS

SPECIALS

RADSOK® MOLDED SURLOK™

Often an inexpensive molded cover is needed for the socket contacts, and the molded SurLok™ serves this purpose while adding positive locking assurance when used with the proper mating pin. Available in three sizes of right-angle type crimp sockets (3.6, 6.0, and 8.0mm), the molded SurLok™ covers current requirements of 50 to 200 Amps continuous. Also available is the standard SurLok™, which incorporates an audible and tactile locking function on in-line barrel crimp type RADSOK® sockets. Consult Amphenol Power Solutions, Fraser, MI for availability.



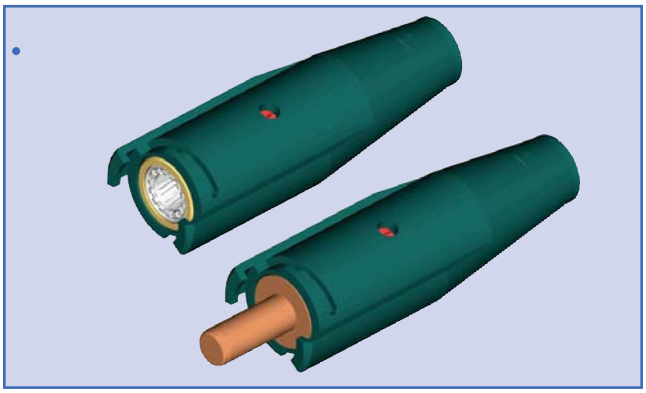
RADSOK® HILOK™

Invented in response to customer demand for a tool-less but semi-permanent high amperage connector, the HiLok® is often used as a replacement to the traditional threaded post and ring terminal. The HiLok™ series of products is based around standard 3.6mm (70A), 6.0mm (120A), and 8.0mm (200A) RADSOK® sizes. The HiLok® function is characterized by low connection force requirements of less than 15 pounds, and high removal force requirements of greater than 50 pounds. A HiLok® removal tool is available for easy disconnection of the mated contacts. Sockets are available with a wide range of wire crimp barrels from 1/0AWG to 12AWG. Pin contacts are available with wire crimp barrels or PCB/Busbar swage mount features. Custom termination methods are available for specific applications.



AMPHE-POWER™ WELDING PLUG

RADSOK® technology is incorporated in this rugged plug and receptacle designed for welder leads. Incorporating 14.0mm RADSOK sockets provides a 500 Ampere continuous current rating. Compression wire termination for 2/0 and 4/0AWG meets the needs of both welding equipment OEM's and field users. The design does not require any crimp tooling or specialized equipment for replacement of contacts or complete receptacle assemblies. The design allows plug-to-receptacle or plug-to-plug connections for flexible configuration options. Both pins and sockets are available for the box mount receptacles, allowing positive keying assurance between leads. Consult Amphenol Power Solutions for availability.



AMPHENOL AEROSPACE RADSOK® LRM CONNECTOR

Designed in response to customer needs for a military Line Replaceable Module (LRM) connector. RADSOK contacts are included to meet customer requirements for the passing of larger amounts of current with lower mating forces which standard contacts will not handle. This connector includes 8 groups of 3 bussed RADSOK 3.6mm sockets (24 contacts total). Each group of 3 is expected to handle a maximum of 140A. Mating pins for the RADSOK sockets are press-fit into aluminum bus bars behind the motherboard connector.

